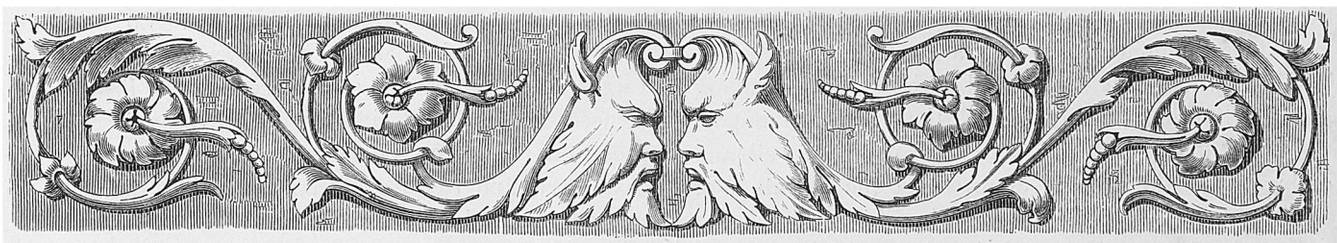
noxious to the same reproach; on the contrary, they are often too elaborate, naturalistic and unconventional, being wrought in direct opposition to the peculiarities of the material. The English works of a larger sort have been more successful, e. g. fire-irons, candelabra, grilles etc., many of which are so simple and conformable to their purpose that they seem to have grown naturally to their destination. Wrought iron screens, panels, hinges of great beauty and artistic value are now being produced under the direction of the architects of Vienna, Berlin, Nurenberg and elsewhere, but the smaller articles, such as locks and door handles, are by no means a success.

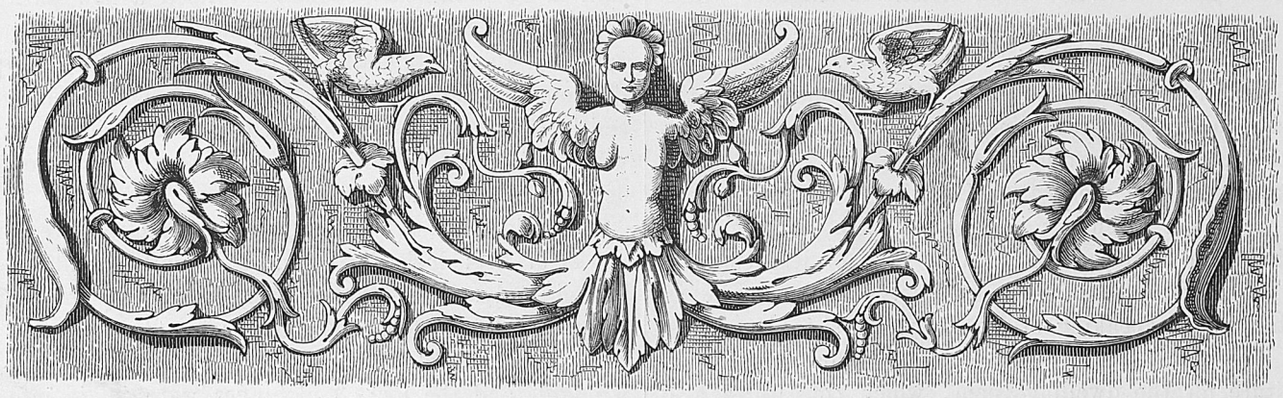
Here at least some beginnings have been made, but if we inquire for the peculiar ornamentation of the more delicate iron-work, for damascening and etching, we look in vain for them among the nations who take the lead in modern Art-Industry, and must cast our eyes to the remotest ends of Europe. The art of beating one metal into another, the more precious into the less, is originally oriental, but was practised during the sixteenth century by all armorers and goldsmiths with no less skill, and is now only known to Spain and Russia in the western world. In the Paris Exhibition were to be seen of Madrid workmanship, arms, shields, besides all kinds of writing materials and vessels of steel with inlaid ornaments of wrought gold and silver, in the old style and of excellent execution. We are unable to state whether the art was traditional, or only revived, but in Russia the so-called Tulaar-work of silver inlaid in steel is a proof of an uninterrupted continuation of an ancient method peculiar to the country, showing a strong affinity to similar works of the east. The arms of our times, iron chests and strong boxes have the greatest need of this style of workmanship, though hitherto no attempts have been made to treat them in this way.

(To be continued.)

SPECIMENS OF ORNAMENTATION.



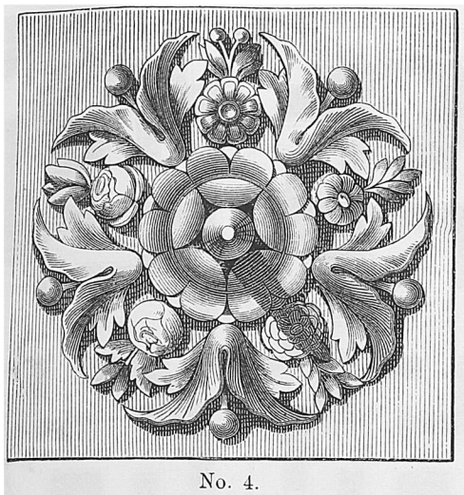
No. 1.



No. 2.

No. 3.

Nos. 1—3. From Perugia. Sixteenth century. Carved Panels from the Stalls in San Pietro Church; finished 1535 by Stefano da Bergamo.



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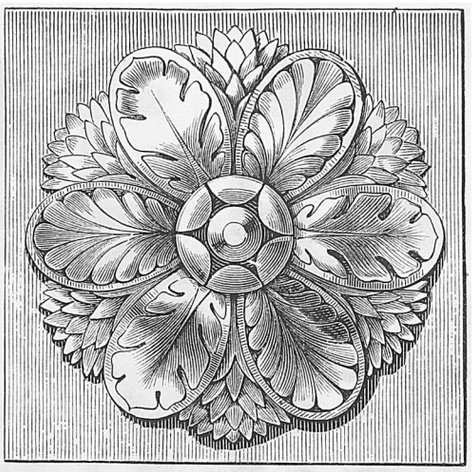

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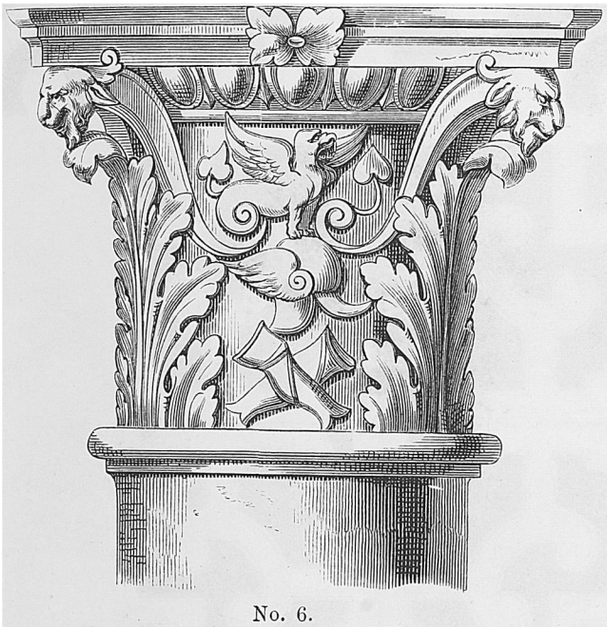

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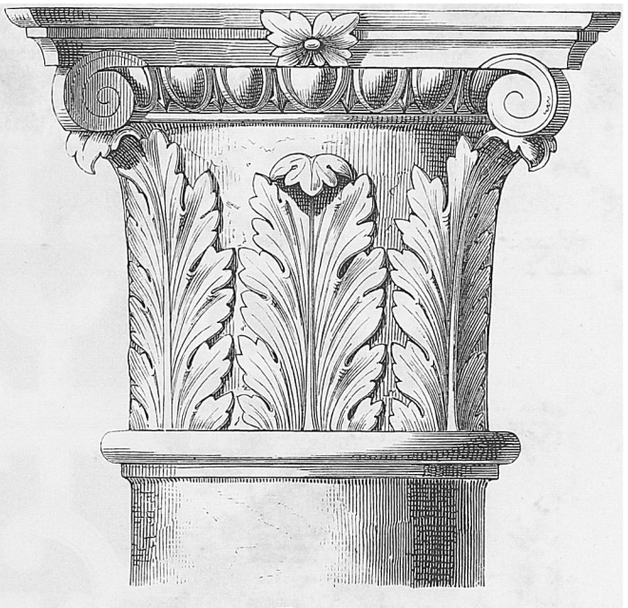

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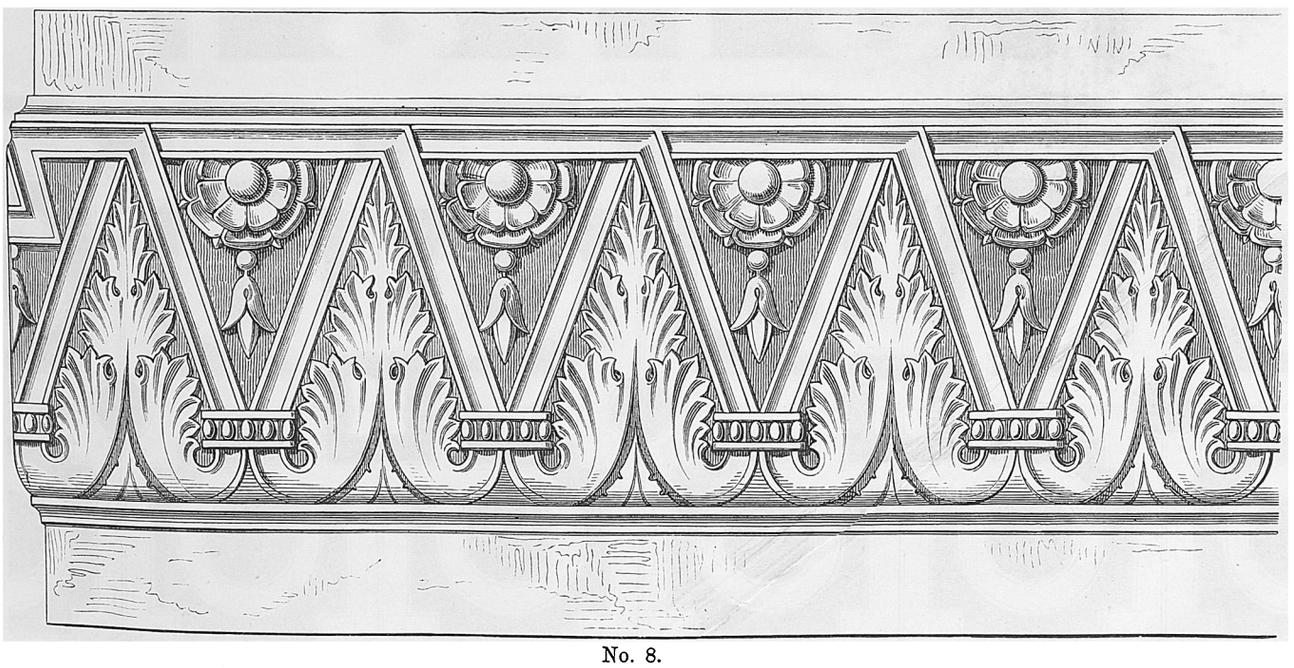
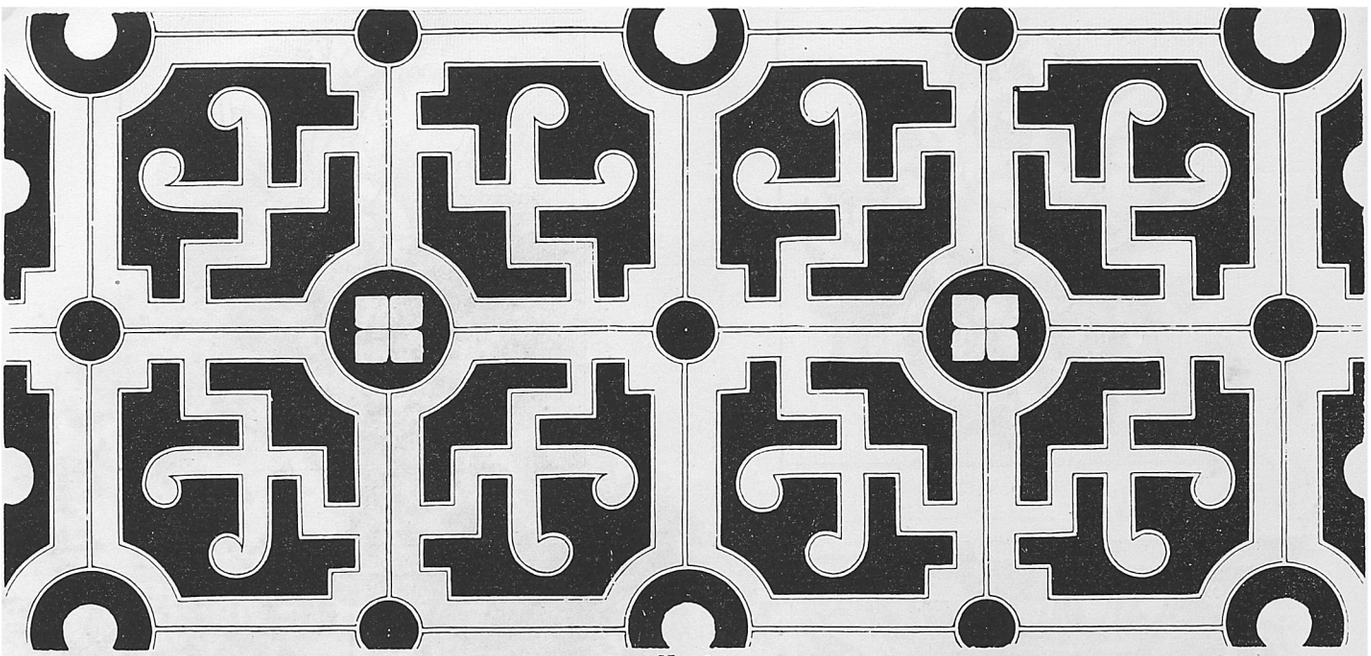


No. 8.

Nos. 4 and 5. Italian. Twelfth century. Flowers from the Door of Parma Baptistery.
Nos. 6 and 7. Italian. Sixteenth century. Capitals from the court of Scrofa Palace. Ferrara.
No. 8. Modern. Enriched Band by M. Villeminot, Paris.



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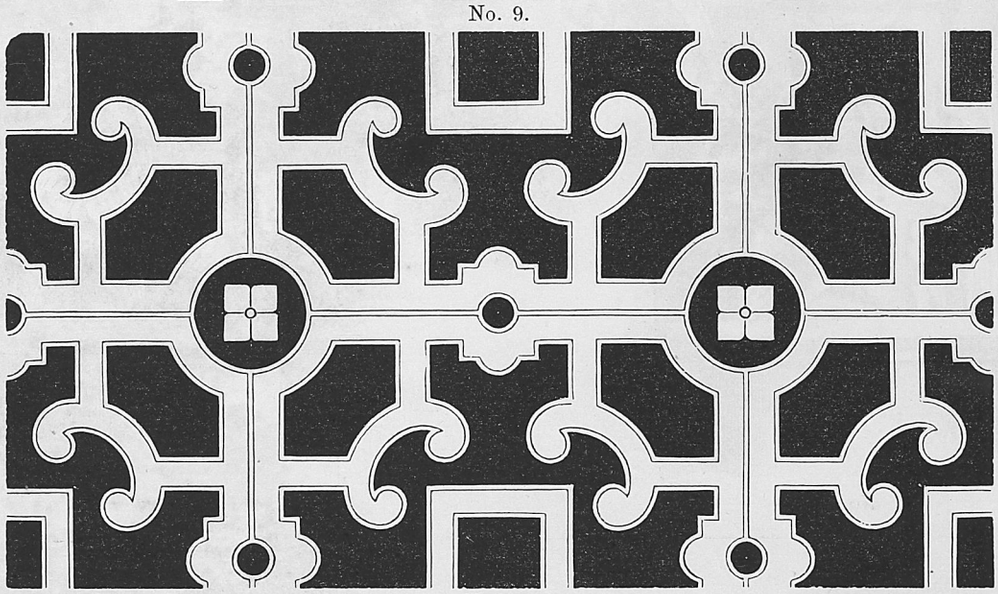

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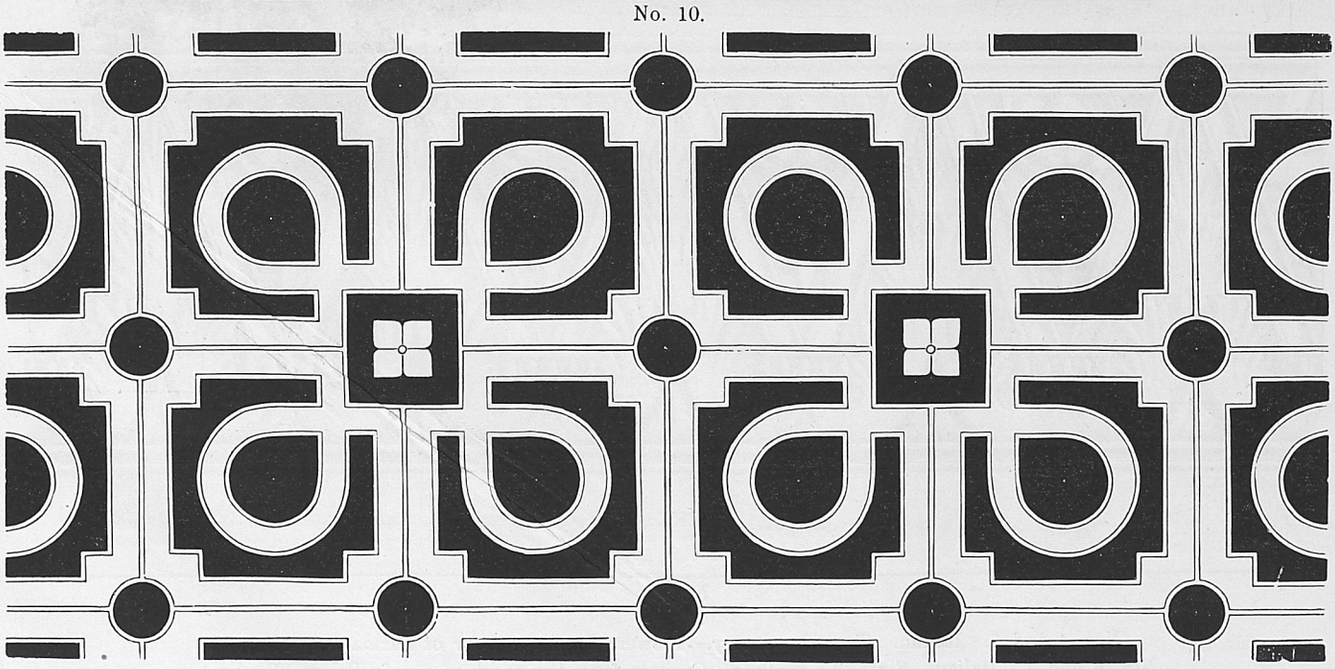
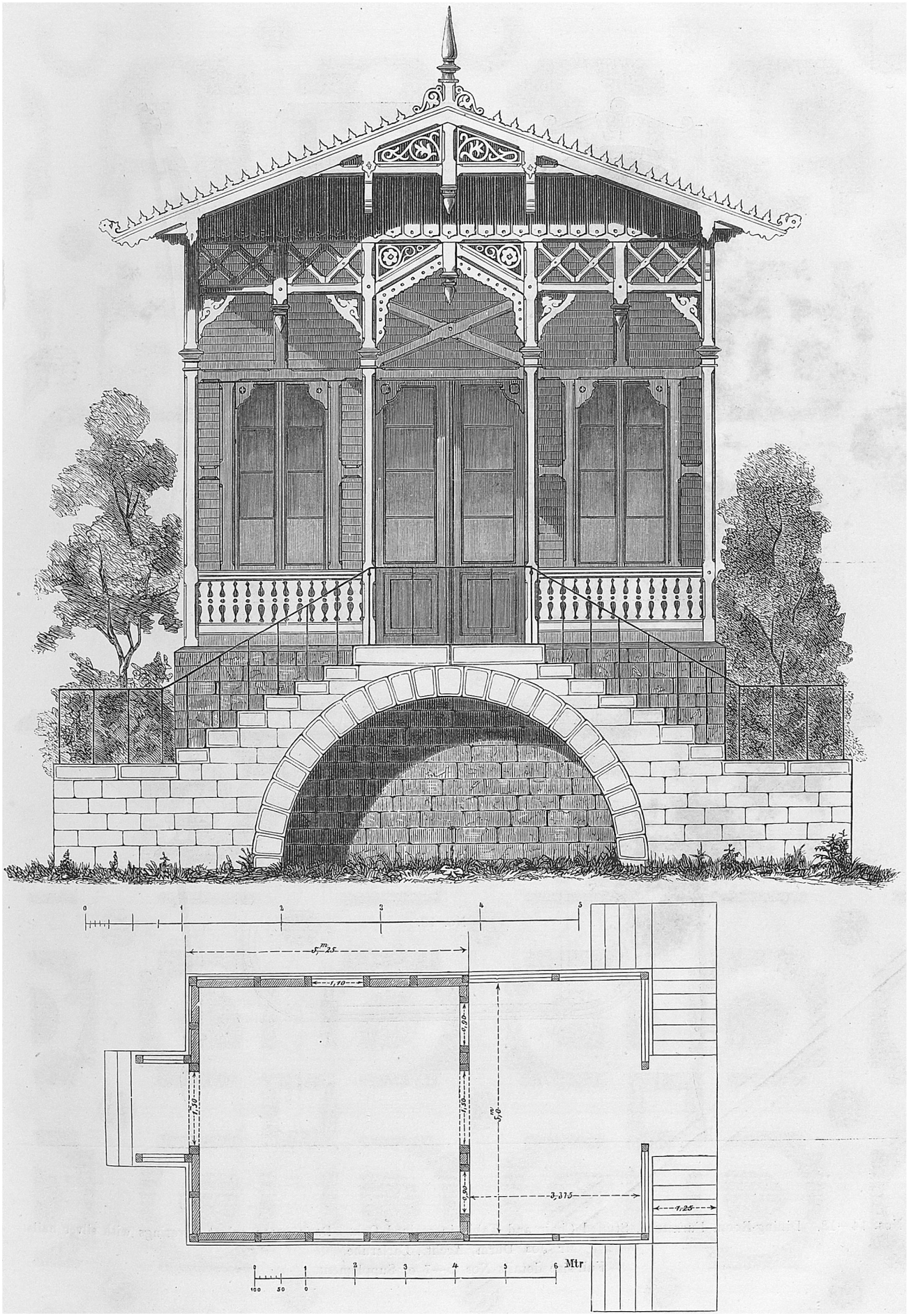
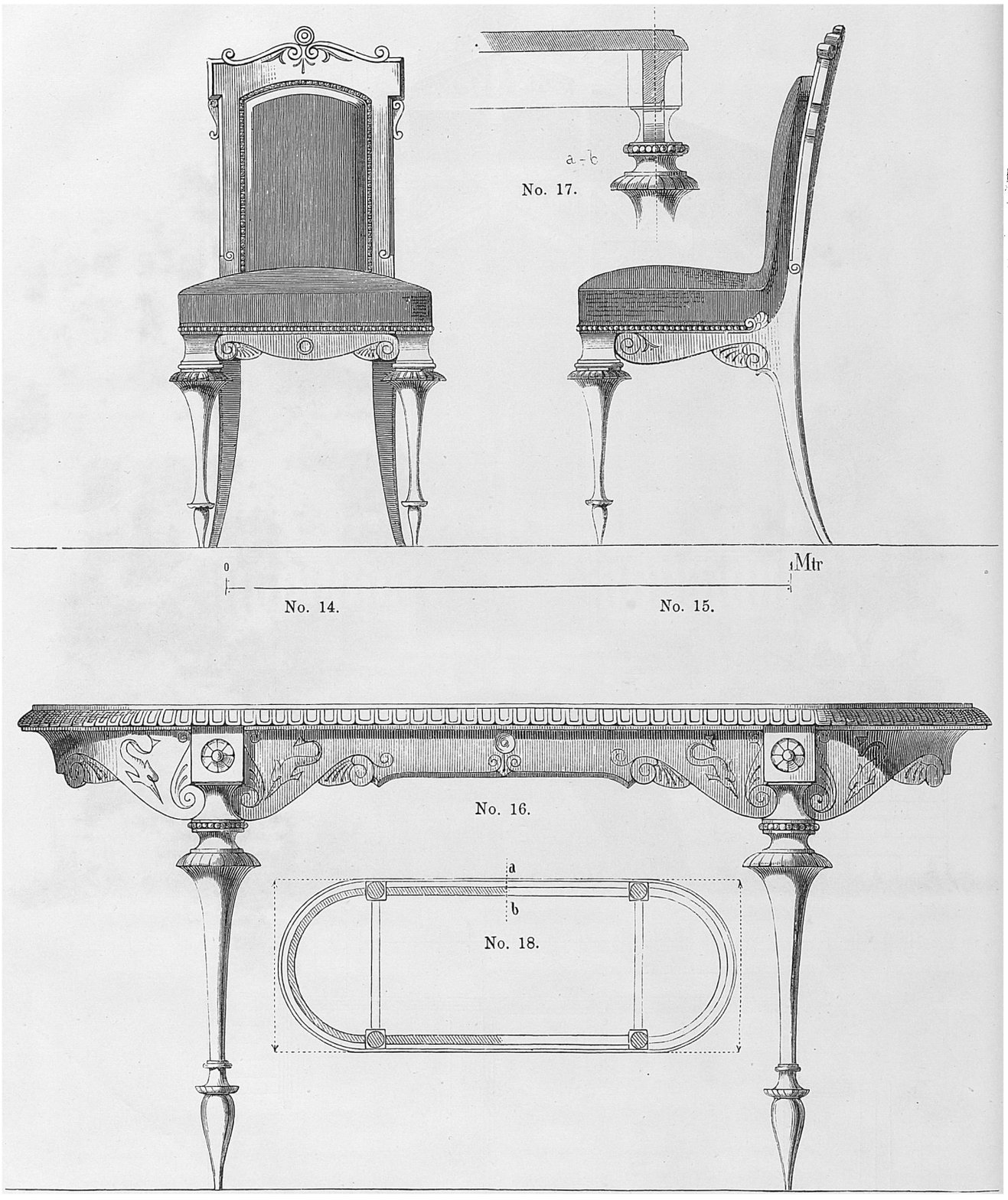


No. 11.

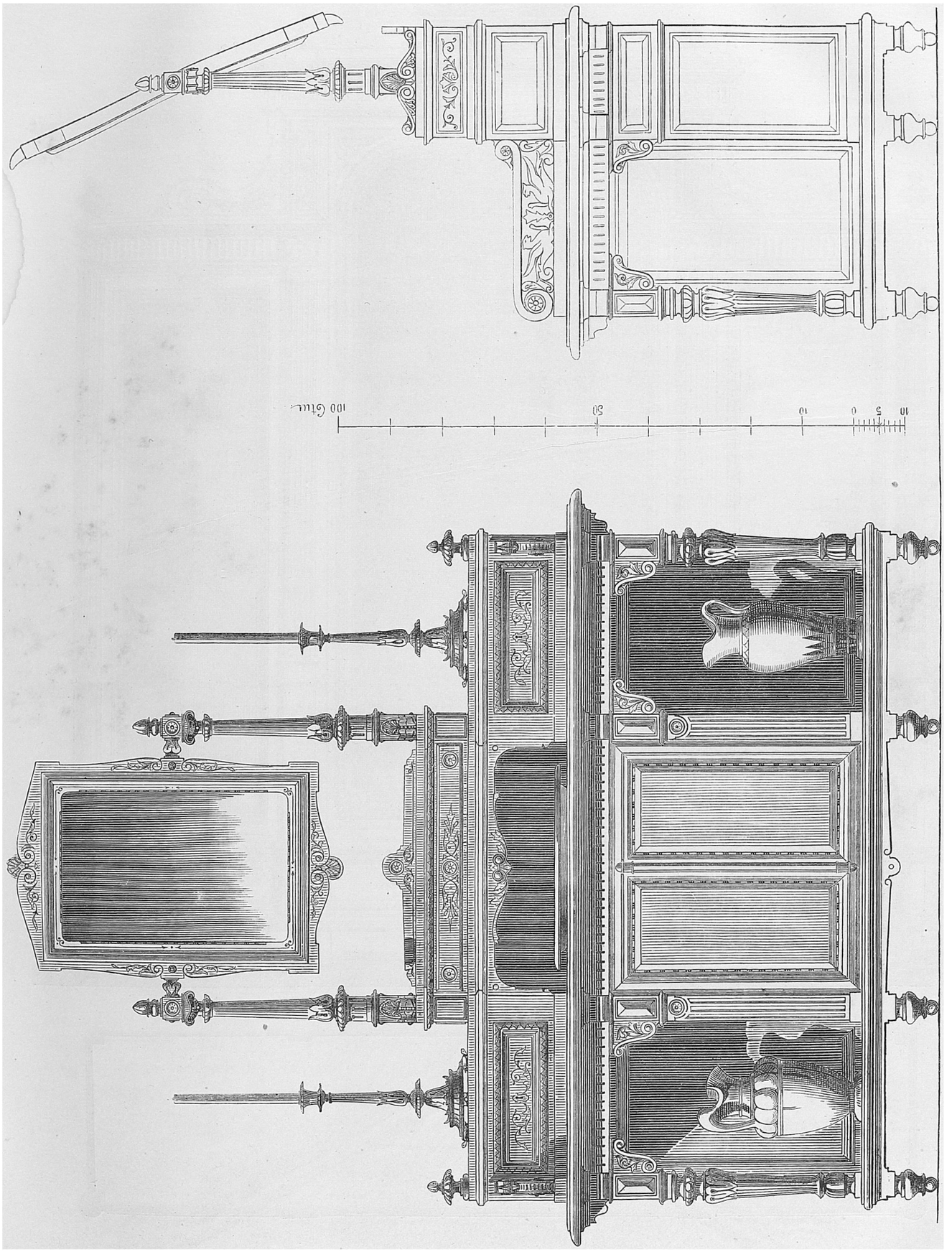
Nos. 9—11. Modern. Patterns for Inlayed Work, Parquet Floors, etc. Prof. E. Herdtle, Stuttgart.



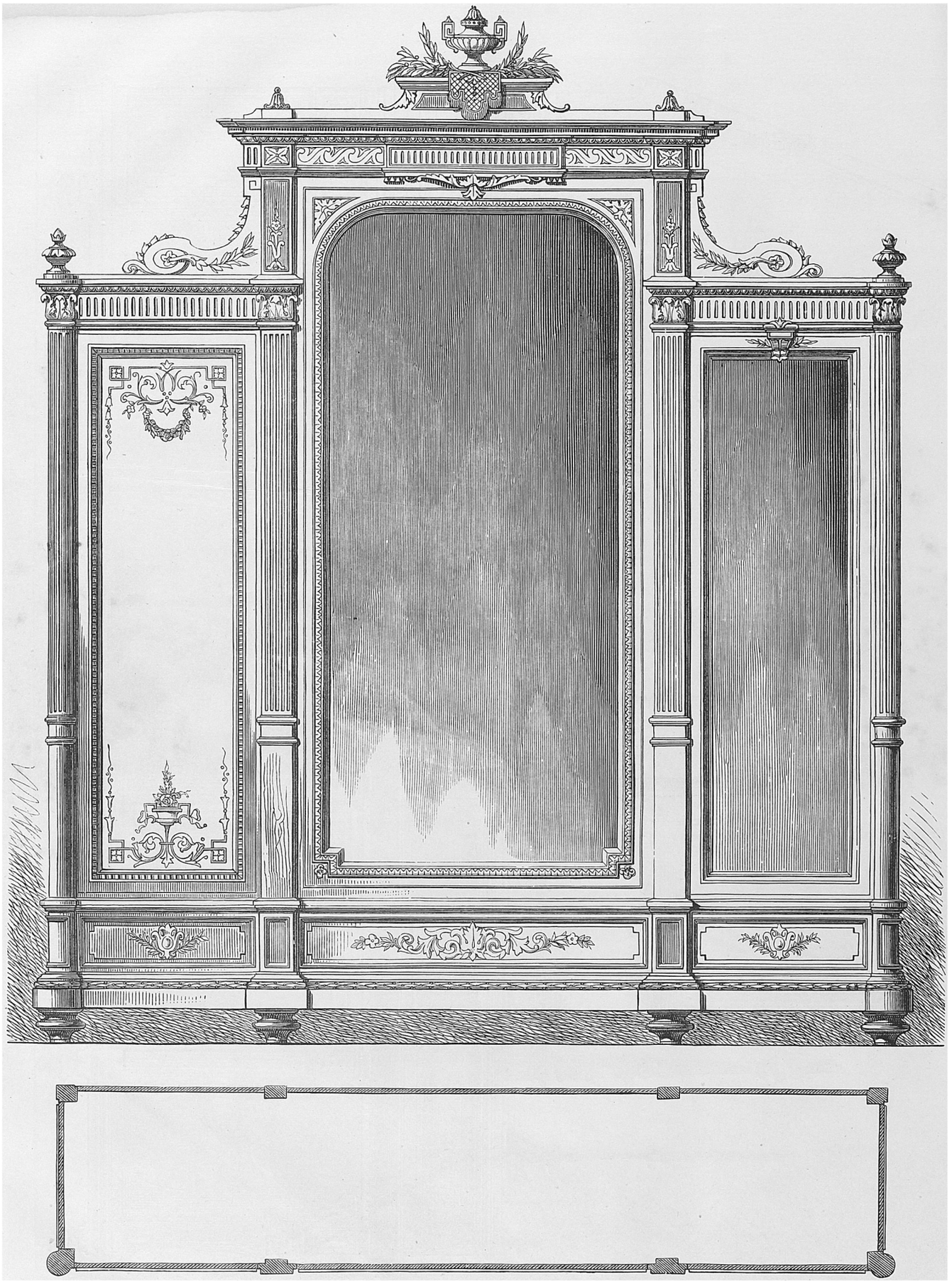
Nos. 12 and 13. Design of a Summer House.
Full-size details, Nos. 1—3 of Supplement.



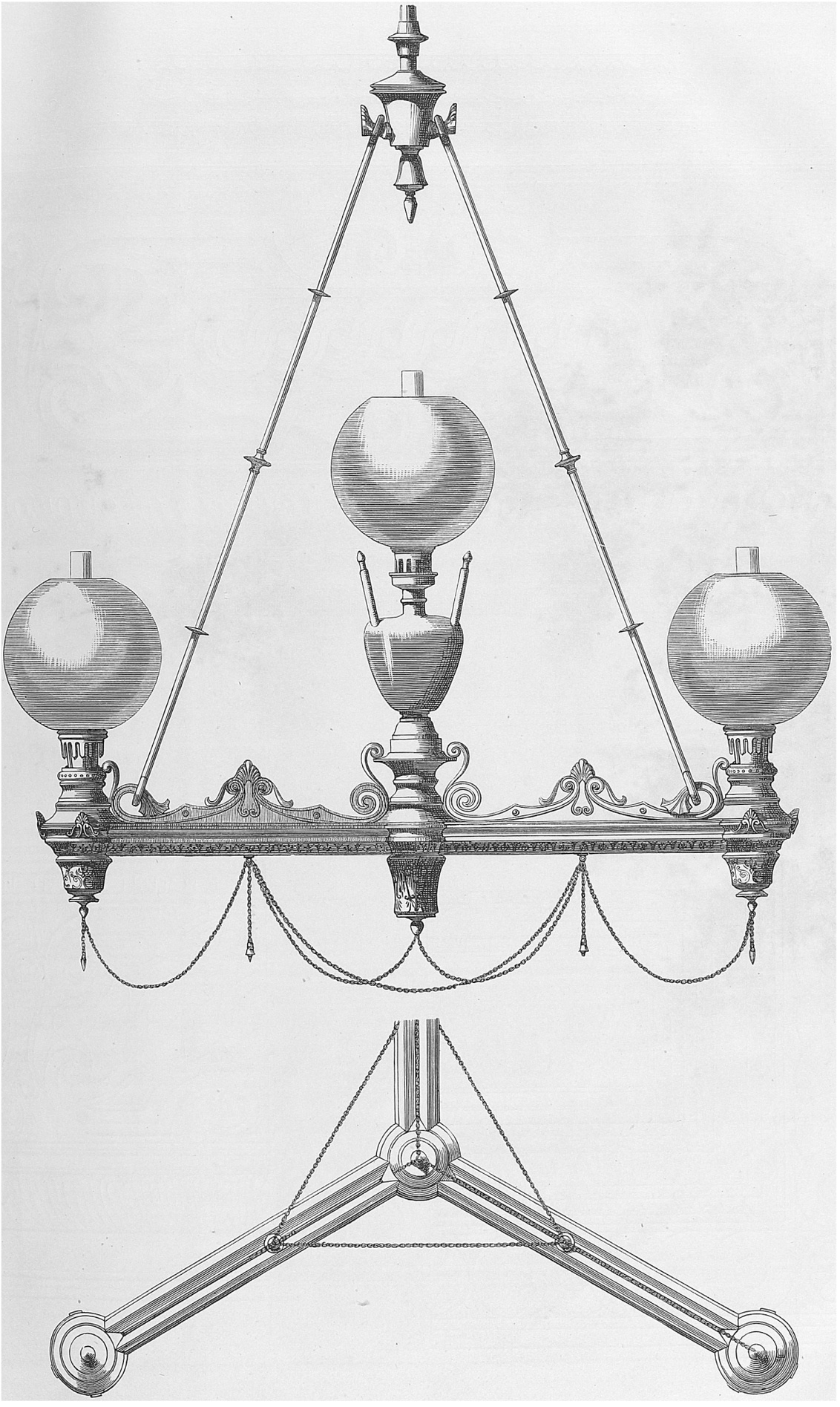
Nos. 14—18. Dining-Room Furniture, Stuffed Chair and Table in stained Oak. Dark green velvet coverings with silver nails.
Mr. Jos. Durm, Archt., Carlsruhe.
Full-size details Nos. 5—7 of Supplement.



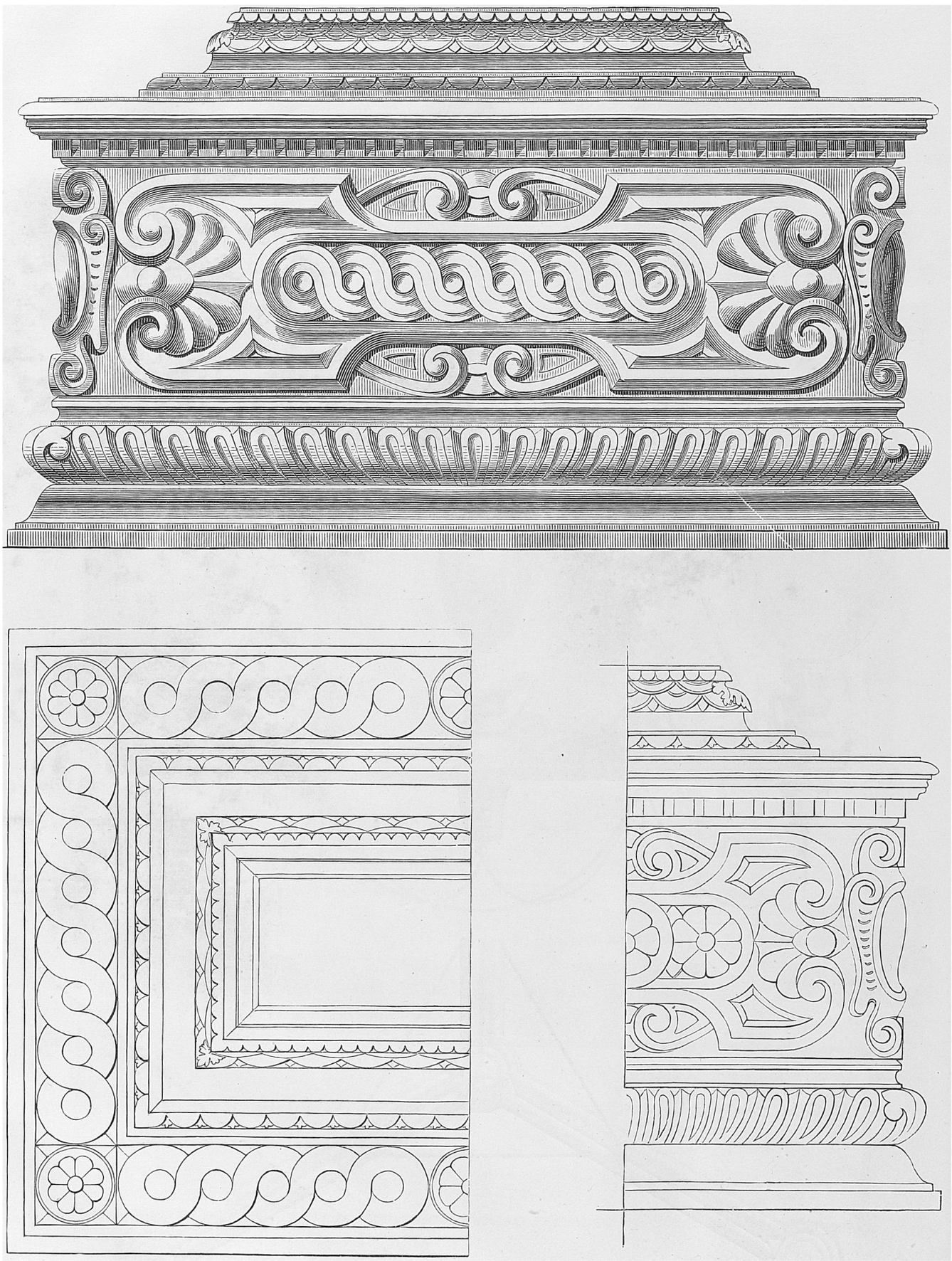
Nos. 19 and 20. Design of a Washhand-Stand by Mr. E. Torge, Archt., Vienna.
To be executed in plain oak or walnut, the ornaments *in cavetto* and picked out in color. Details No. 8 of Supplement.



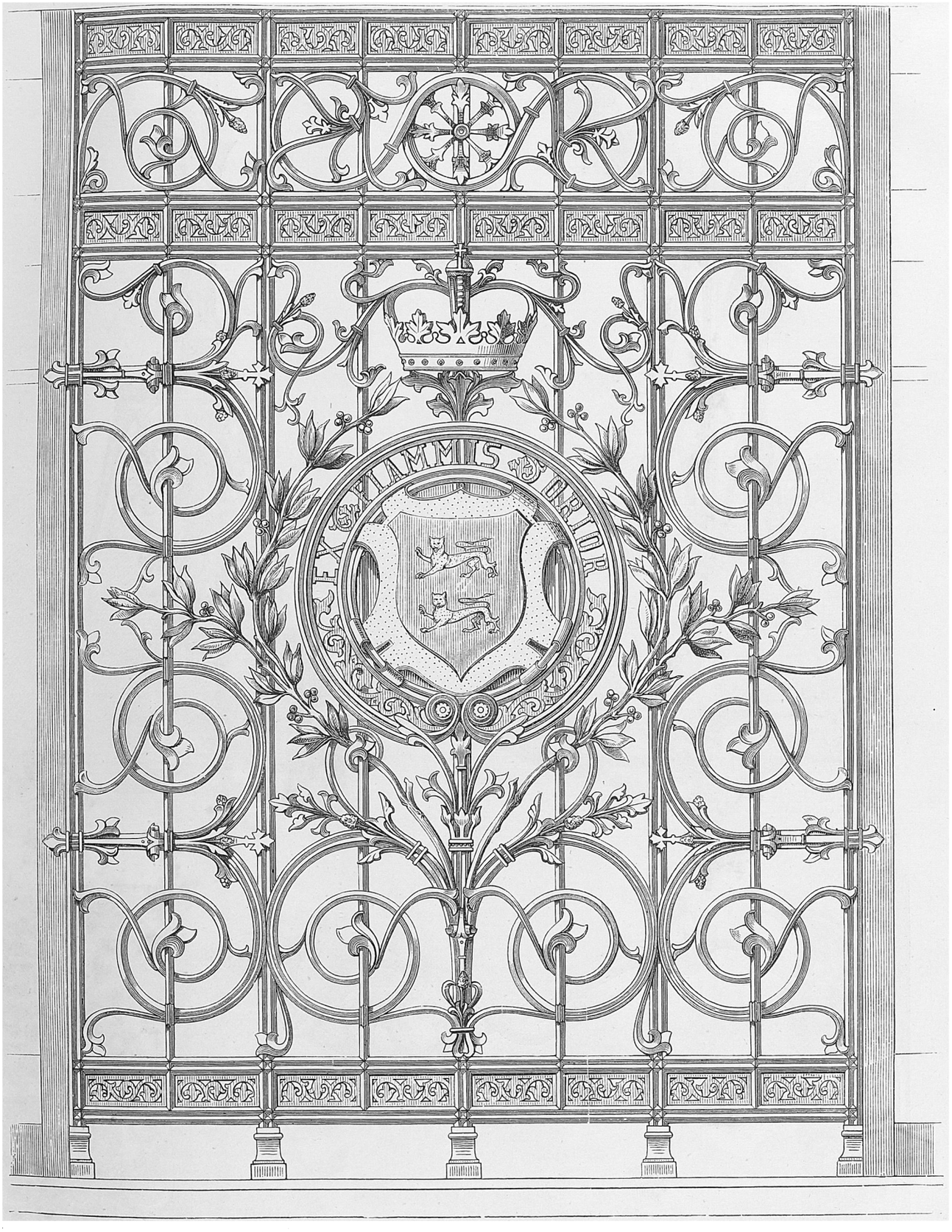
Nos. 21 and 22. Exhibition of the *"Union Centrale des Beaux-Arts appliqués à l'Industrie,"* Paris 1869:
Cabinet in the Style of Louis XVI designed and executed in maple by M. Semey, Paris.
The side-panels instead of being carved may be filled in with glass, as shown by the difference of arrangement in the design.



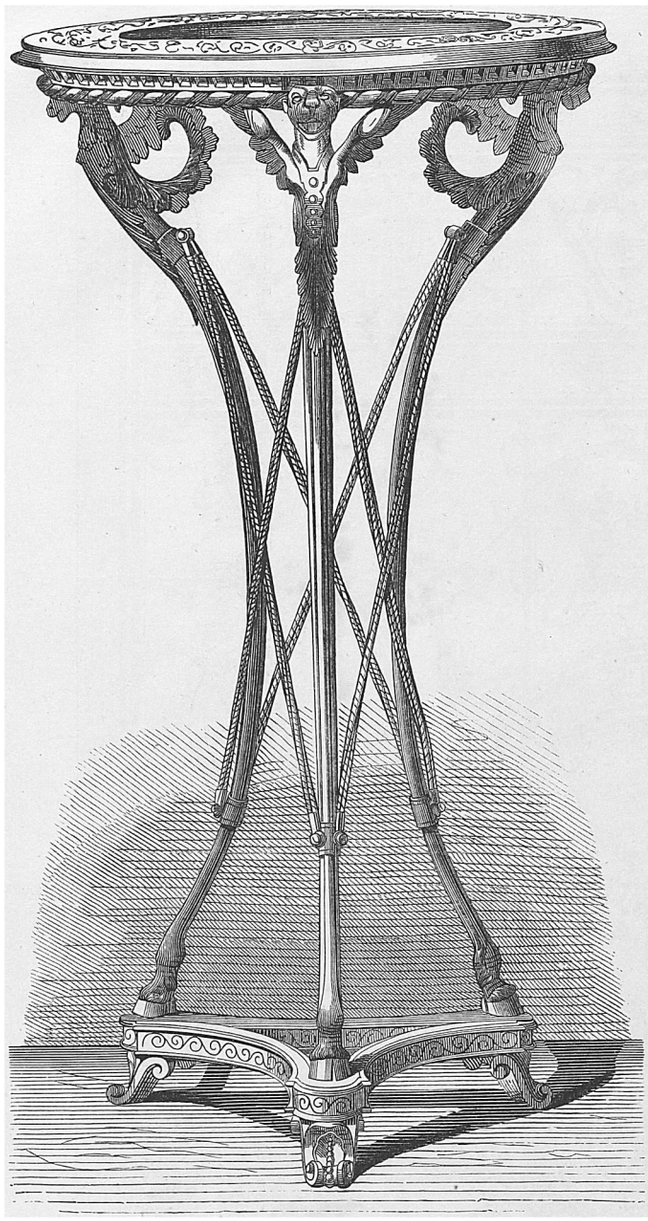
Nos. 23 and 24. Bronze Gaselier in the Pompeian House of Prince Napoleon. M. A. Normand, Archt., Paris.
Details in No. 4 of Supplement.



Nos. 25—27. Florentine, sixteenth century. Casket in Walnut Wood. South Kensington Museum. $^{2}/_{5}$ full-size.



No. 28. Chimney Screen, wrought from sheets of copper gilt. Mr. Wernicke, Archt., Breslau.



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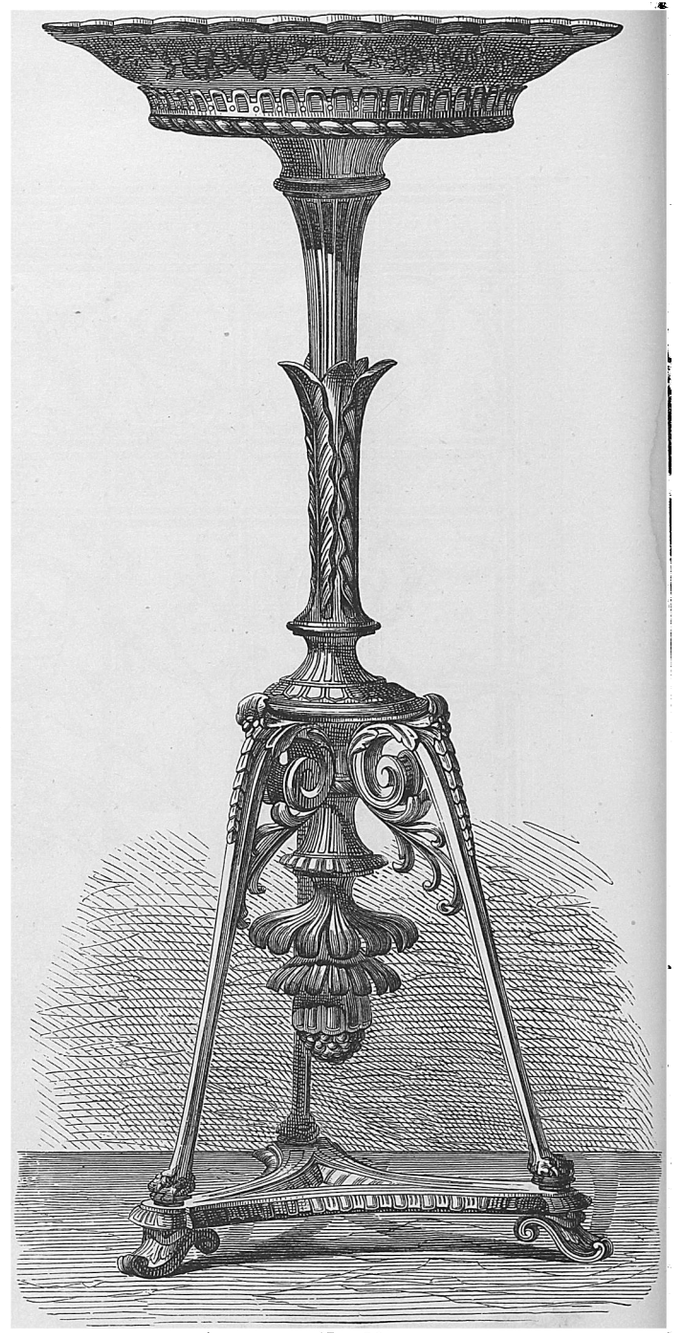

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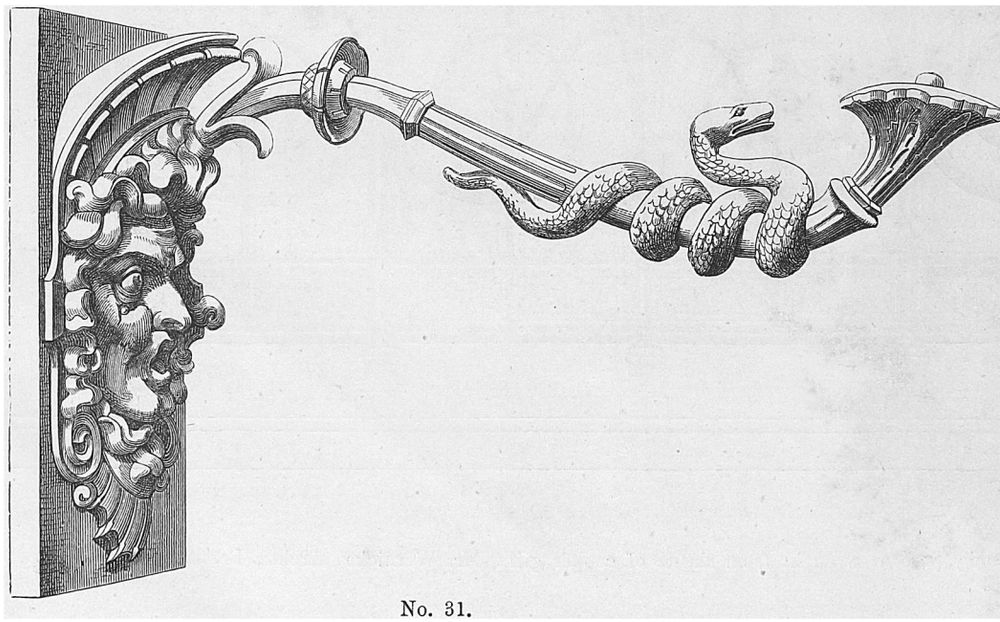
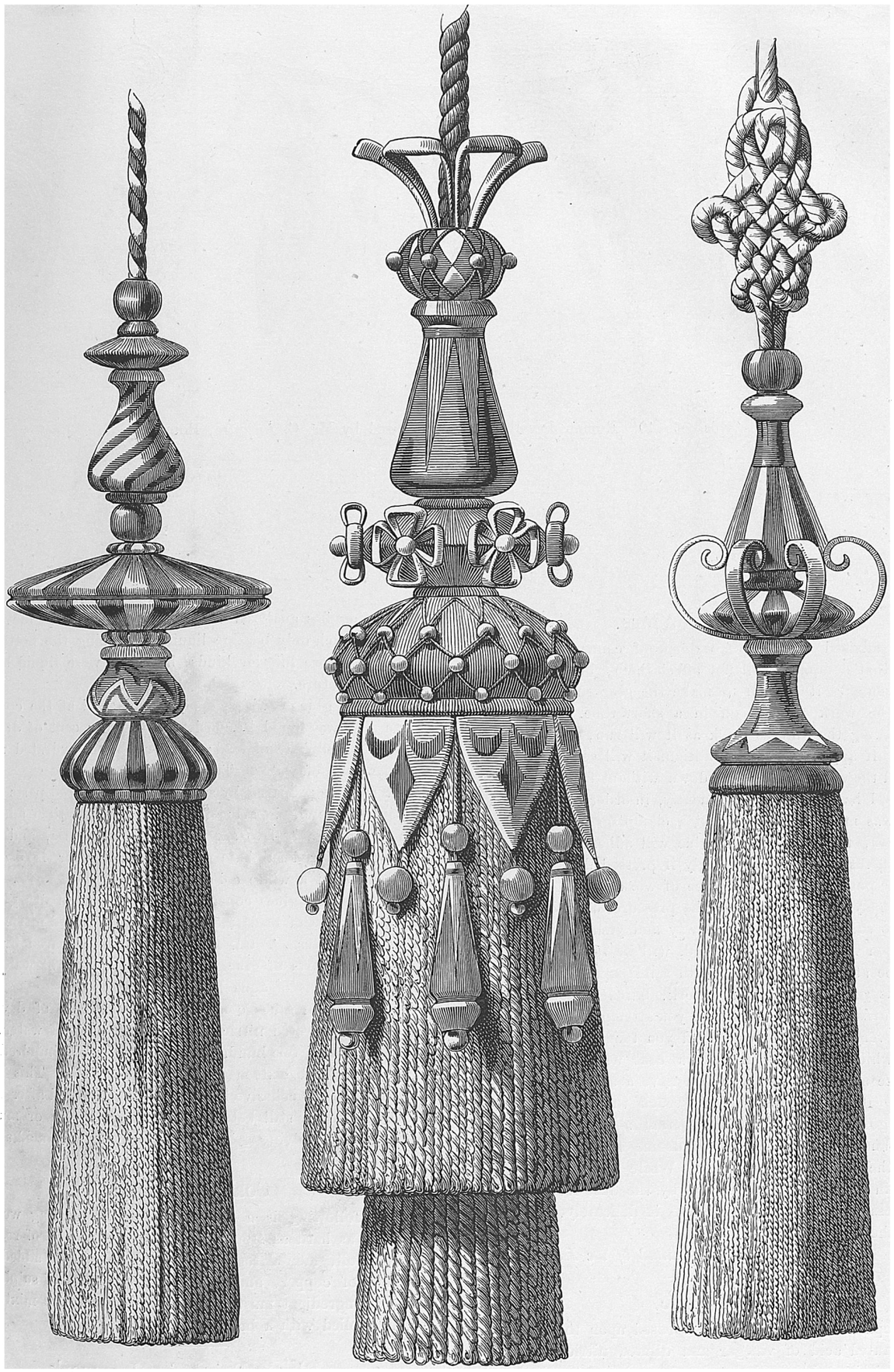


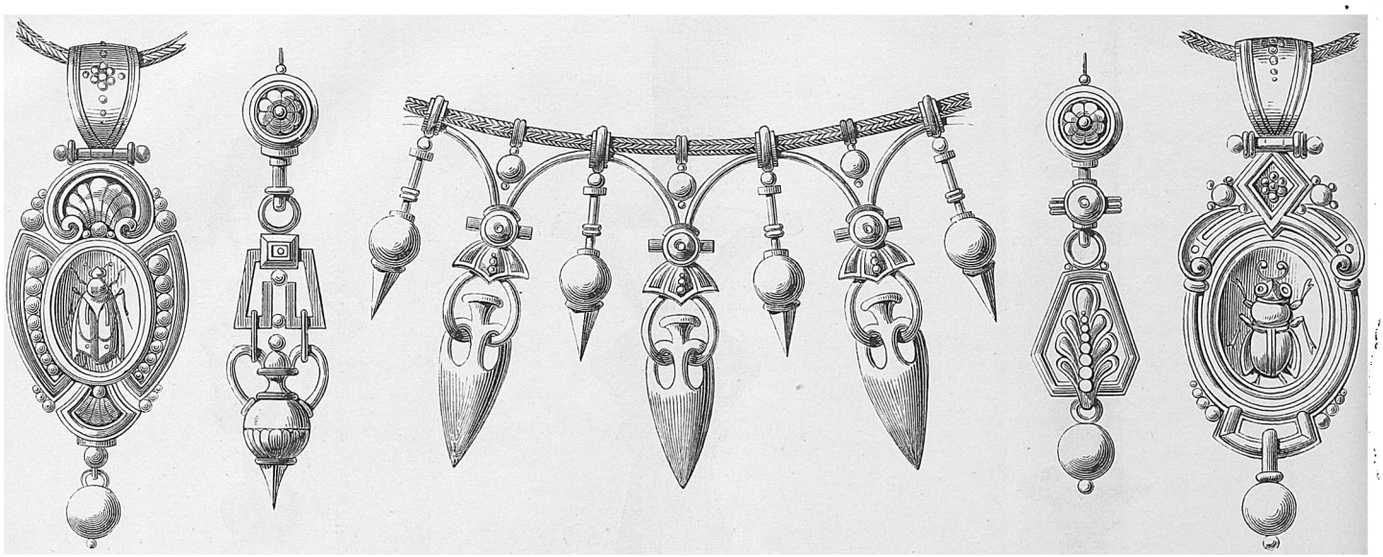
No. 31.

No. 32.

No. 29. Little Bronze Table in form of a tripod supporting a flat vase.
No. 30. Fancy Table in Bronze with a vase for the reception of cards, etc.
Nos. 31 and 32. Modern. Design of Gas-Bracket by Mr. W. Genutat, Berlin.



Nos. 33—35. Tassels.



Nos. 36—40. Roman Jewellery, manufactured by Mr. C. Ansorge, Rome.

VARIOUS.

Gluing in Veneers.

I have advised the use of waterproof cements for fine inlaying, so that dampness will not affect them, but as this is not always convenient, it is well to make the glue so that it can be used and the work finished off in a short time. This is easily done by making the glue as thick as it will run, or so that it is like a jelly. If applied in this condition, it will set hard in thirty minutes and the work may be cut down without fear or danger of its moving. I have done this frequently, in order to see what kind of work I was making. Always put a clamp on your work wherever you can, for although the glue will adhere of itself to the wood, it adheres much more strongly if pressed down by a clamp. Also, never put a veneer on a piece of work that is uneven, for although it may set square under the pressure of the clamp, when you come to scrape it, it will give way and yield to the inequalities, and when varnished and polished, will be full of depressions.

Don't be afraid to rub down with sand paper, under the impression that you are spoiling the work, but let the varnish get thoroughly dried, and be hard before you attempt it. Be sure, also, to remove every particle of varnish if you touch it at all, otherwise that which remains will take a coat while the bare wood will not take so much, and you will have a surface full of scars and ridges. It is not necessary to touch the wood in rubbing down, but go down to the wood, so that a waxy appearance is presented, and you will have a handsome finish that will add greatly to the beauty of the work. White holly is easily soiled when used in connection with ebony, by the dust from it, and it will be necessary to rub it, or scrape it delicately, before varnishing, without touching the ebony.

Watson's Manual of the Hand Lathe.

Liquid Glue.

The preparation of liquid glue is based upon the property of the concentrated acid of vinegar and diluted nitric acid to dissolve the gelatine without destroying its cohesive qualities. Dumoulin has given the following recipe. He prepares his »liquid and unalterable glue« in a pint of water, and then gradually adding three and a half ounces of nitric acid of 36° Beaumé. Effervescence takes place under generation of nitrous gas. When all the acid has been added, the liquid is allowed to cool.

Fehling has analyzed various kinds of liquid glue, the better kinds of which only became liquid by placing the bottles in tepid water, the more inferior kinds, however, were liquid at the ordinary temperature.

Russian glue — white, opaque, and solid at the common temperature — was found to consist of 35.6 per cent of dry glue; 4.1 per cent of sulphate of lead; 1.4 per cent of hydrated nitric acid; 53.9 per cent of water. Total 100 parts.

It may be prepared by softening one hundred parts of the best glue in one hundred parts of warm water and then adding slowly from five and a half to six parts of aqua fortis, and finally six parts of powdered sulphate of lead. The latter is used in order to impart to it a white color.

Pale »steam glue« consists of 27 per cent of dry glue; 1.9 per cent of sulphate of lead; 2.5 per cent of hydrated nitric acid; 68.6 per cent of water. Total, 100 parts. It is prepared by dissolving one hundred parts of glue in double its weight of water, and adding twelve parts of aqua fortis.

Dark »steam glue« contained 35.5 per cent of dry glue; 3.5 per cent of hydrated nitric acid; 61 per cent of water, and can be obtained from one hundred parts of glue, one hundred and forty parts water, and sixteen parts of aqua fortis. This liquid glue exhibits a greater cohesive force than that prepared after Dumoulin's recipe. However, still better kinds of liquid glue or mucilage are obtained by dissolving gelatin or dextrin in acetic acid and alcohol.

Coating of Wood.

The following is a German recipe for coating wood with a substance as hard as stone: 40 parts of chalk, 50 of resin, and 4 of linseed-oil, melted together; to this should be added one part of oxide of copper, and afterwards one part of sulphuric acid. This last ingredient must be added carefully. The mixture, while hot, is applied with a brush.

Black Paint for Ironwork.

A varnish for iron work can be made as follows: Obtain some good clean gas tar, and boil for four or five hours, until it runs as fine as water; then add one quart of turpentine to a gallon of tar, and boil another half hour. Apply hot.